

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) PTB-1207-133 Confirmation No. 4986
	Application Number	Filed
	10/580,609	May 25, 2006
	First Named Inventor	
	TSUJI	
	Art Unit	Examiner
	3656	Alan B. Waits

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ Applicant/Inventor

☐ Assignee of record of the entire interest. See 37 C.F.R. § 3.71. Statement under 37 C.F.R. § 3.73(b) is enclosed. (Form PTO/SB/96)

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38,009
(Reg. No.)

☐ Attorney or agent acting under 37CFR 1.34.
Registration number if acting under 37 C.F.R. § 1.34 _____

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Signature

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Requester's telephone number

June 30, 2011

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.*

☒ *Total of 1 form/s are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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**STATEMENT OF ARGUMENTS IN SUPPORT OF
PRE-APPEAL BRIEF REQUEST FOR REVIEW**

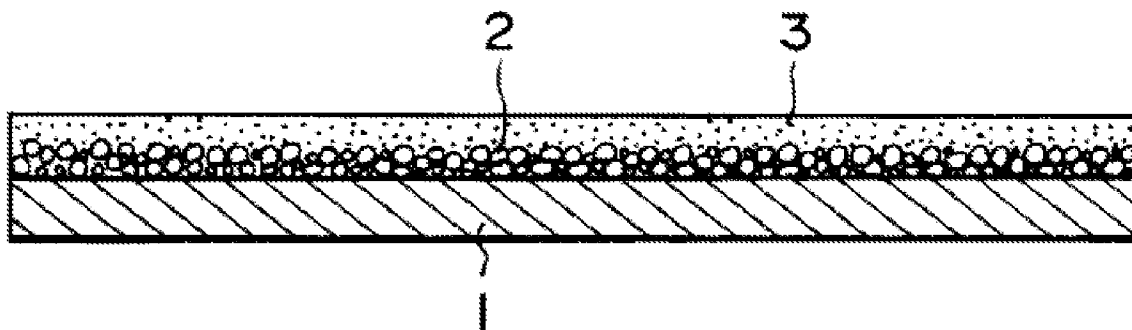
Claims 1 and 12-22 stand rejected under 35 U.S.C. § 103(a) over Hiuga (JP 59-212508) in view of Nakamaru (U.S. Patent No. 5,732,322), Debnam (U.S. Patent No. 5,927,862), and Picone (U.S. Patent No. 6,250,815). The four-way obviousness rejection fails to establish a prima facie case for at least the following reasons.

As an initial matter, Hiuga, the primary reference, is not in English. Accordingly, Applicants respectfully request that the Examiner supplement the record with an English translation of Hiuga. MPEP 702.02(II). The Office Action appears to rely on disclosure outside the scope of the abstract (e.g., the claimed “angle”).

Error #1 Nakamaru Fails To Teach A Copper Coating That “entirely” Coats The Back Plate Including Its Cylindrical Surface, Tapered Surface, And End Face

Claim 1 sets forth that a back plate is entirely coated with copper and that a porous sintered metal layer adhered integrally to a copper coating layer on one surface of the back plate.” There is no teaching or suggestion of the above features in Nakamaru or the other applied references.

Nakamaru discusses a resin composition for a sliding member along with different types of compositions for the resin. (Columns 11-12). The resin composition is used in conjunction with an embodiment shown below from Nakamaru’s Fig. 1.



Here, a “composite-layered sliding member” includes a “steel backing” 1; a porous sintered metal layer 2; and a resin component 3 that slides (e.g., PTFE). (Column 10, Lines 57-63). The porous sintered metal layer 2 appears to be composed of numerous small particles. (Column 6, Lines 35-41). These particles are strongly bound to each other and further are strongly bound to the steel backing 1. (Column 6, Lines 42-45).

Nakamaru also states that “such strips of steel may have been subjected to copper plating or other pertinent treatment for improving corrosion resistance.” (Colum 6, Lines 28-30). The Office Action alleges that this relates to the above noted features of claim 1. Specifically, the Office Action states “[i]t only makes sense that the entire metal back plate would be entirely coated, otherwise corrosion resistance would be ineffective.” (Office Action at Page 5). However, a person of ordinary skill in the art would not understand Nakamaru’s disclosure in such a manner.

First, Nakamaru expressly states that the porous layer is strongly bound to the steel backing 1. (Column 6, Lines 43-45). In contrast to the nature of the structural binding in Nakamaru, claim 1 sets forth that the porous metal layer is bound to a copper layer. There is no teaching or suggestion in Nakamaru of the particles being bound to such a copper layer.

Second, Nakamaru fails to teach that the back plate 1 is entirely coated with copper. Nakamaru discusses “strips of steel” that are subjected to plating techniques in order to improve corrosion resistance, but is silent as to whether the strips of steel are “entirely” coated, as claimed. The only discussion of “entirely” coating a steel backing is found in the Office Action’s conclusory statement that “it only makes sense.” However, there is no factual evidence offered, or pointed to, by the Office Action that supports that this conclusion is how a person of ordinary skill in the art would have understood Nakamaru.

Third, in addition to setting forth that the back plate is entirely coated with copper, claim 1 specifies particular parts that have the copper coating. Specifically, claim 1 recites, in combination, “the cylindrical surface, the tapered surface and the one annular end face consisting of an exposed surface of the copper coating layer.” Nakamaru is silent with respect to the copper layer being exposed at these three distinct portions (cylindrical surface, tapered surface, end face) of the back plate. Accordingly, Nakamaru fails to teach or suggest such features.

Error #2 The References Fail To Recognize The Claimed Radii In Relation To A Thickness Of The Bush Bearing

Applicants’ claim 1 also sets forth a relationship between two radiuses and a wall thickness of the bush bearing at the cylindrical surface of the outer peripheral surface.

The Office Action acknowledges that Hiuga does not disclose these features. Instead, the Office Action concludes that it would have been obvious for a person of ordinary skill in the art to suddenly arrive at the structural relationship set forth in claim 1 by relying on *In re Aller*.

However, the Office Action's reliance on *Aller* for this factual situation is misplaced. Specifically, while *Aller* does relate to the optimization of ranges, the Federal Circuit and its predecessor have recognized exceptions to *Aller*. In particular, only variables that are recognized as result-effective can be optimized in the manner set forth in *Aller*. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); MPEP 2144.05(II)(B).

In *Antonie*, the claims at issue related to a relationship of 0.12 gal./sq. ft. between the tank volume of a water treatment tank and a contactor area. The Court noted that the prior art did not acknowledge or discuss this relationship. Accordingly, as the property was not acknowledged by the prior art as being result effective, there was no basis for a person of ordinary skill in the art to optimize the claimed parameter. The Court held this was "another exception" to *Aller's* optimization determination. *Antonie* at 9.

This instant situation is similar to *Antonie*. Specifically, the applied references do not discuss the claimed relationship between the two radiuses and the wall thickness. Hiuga appears to be concerned with the length of the inclined surface. There is no discussion or indication that the English abstract in Hiuga acknowledges the above identified and claimed property of Applicants' claim 1. Specifically, there is no discussion of the thickness of the bearing or relating the thickness to the radiuses. The simple showing of an incline in Hiuga (e.g., W1/W2) is not sufficient. This does not disclose a relationship as claimed by Applicants. Thus, similar to *Antonie*, as there is no acknowledgement, there is no factual basis for a person of ordinary skill in the art to even begin performing an optimization.

It is not enough that Hiuga teaches a first and second radii and that it has some thickness. Moreover, the claimed thickness is defined as being at the cylindrical surface of the outer peripheral surface. For example, Fig. 3 shows the thickness "t" as including the two copper layers, the back plate, the sintered material, as well as the sliding layer. Even if Hiuga teaches a thickness, that thickness is not related to the radii and the

thickness is not defined as it is in claim 1. Thus, it cannot be obvious to optimize the radii in view of the thickness based on Hiuga's teachings.

Further, Applicants' specification set forth the advantages of the claimed features.

Moreover, since the difference δ is not less than $0.1t$, it is possible to secure an outer peripheral edge of the annular end face having a small diameter with respect to a hole diameter of the housing. As a result, it is possible to reliably perform the alignment with the housing hole prior to the press fitting into the housing hole, and to ensure the guiding action based on the tapered surface in the press fitting into the housing hole. In addition, since the difference δ is not more than $0.3t$, it is possible to secure the wall thickness of the annular end face to such an extent that the deformation of the end face side does not occur in the press fitting into the housing hole. As a result, it becomes possible to assure the roundness of the inner peripheral surface even after the press fitting.

(Paragraph 8). These advantages are not discussed or recognized by the references. This provides further evidence that Hiuga does not acknowledge the features relating to the above recited features of independent claim 1.

Error #3 Debnam Fails To Provide Missing Teachings

The Office Action appears to allege that element "B" of Debnam's figure 6 relates to features of claim 1 that set forth first and second smooth circular arcs. However, there are two different arcs set forth in the claim. The identified element "B" in Debnam is only one apparent arc at the end of Debnam's bearing. There is no discussion in Debnam of another smooth arc at the transition of the tapered surface to the cylindrical surface, much less in the ranges set forth in the claims. Accordingly, Debnam fails to disclose the other smooth arc set forth in the claims.

Furthermore, a person of ordinary skill in the art would not seek to combine Debnam with the other applied references. Specifically, Debnam teaches away from working with the metals bearings taught in the other applied references. (See, e.g., Column 1, Lines 20-40). Instead, Debnam teaches working with plastic. (Column 3, Lines 58-60). A person of ordinary skill in the art would not look to a reference that specifically taught away from working with metal bearing construction.

Conclusion

Accordingly, the four-way combination of Hiuga, Nakamaru, Debnam, and Picone fails to teach or suggest at least the above features of independent claim 1. Withdrawal of the rejection is respectfully requested.

In view of the above remarks, Applicants respectfully submit that the claims are patentable and that the entire application is in condition for allowance.